

# PRICE LIST AND ORDERING INFORMATION

## SERVIS TIME RECORDERS

### MECHANICAL MODELS

|  |         |
|--|---------|
| Model K . . . . .  | \$43.00 |
| Model TRT . . . . .  | 53.00   |
| Model TRT (7-day) . . . . .                                    | 57.30   |
| Model DS (6 Volts or 12 Volts) . . . . .                       | 55.00   |
| Model DSR (6 Volts only) . . . . .                             | 58.00   |
| Adjustable Pressure Switch<br>For Use With Model DSR . . . . . | 23.50   |
| Surge Dampener For Use With DSR . . . . .                      | 15.00   |

Magnet coils for Model DS are available for 6 volts or 12 volts. Model DSR is for 6 volts. For higher voltages, suitable resistors are available. *Specify Voltage.*

### ELECTRICAL MODELS

|  |         |
|--|---------|
| Model M (Without accessories) . . . . .      | \$75.50 |
| Accessories Available                        |         |
| (S) Series Relay . . . . .                   | 19.00   |
| (T) Elapsed Timer . . . . .                  | 19.75   |
| (R) Reset Counter . . . . .                  | 31.30   |
| (C) Non-reset Counter . . . . .              | 15.50   |
| Current Transformer . . . . .                | 13.50   |
| Rheostat (For Selective Recording) . . . . . | 5.75    |
| Voltage Transformer . . . . .                | 14.00   |

*Specify Voltage* which will be used to operate recording motor, whether 110 or 220 volts A.C. This is generally, *but not always* the same as load voltage.

### CHART DRIVES (CLOCK MOVEMENTS) FOR SERVIS TIME RECORDER

8-12-24-72 hours per revolution available in all above models, plus 4-hour per revolution available for Models TRT, DS, DSR and M only. 72-hour movements \$4.30 additional where specified in any Recorder.

## SERVIS SPEED RECORDERS

### MILES PER HOUR

|  |         |
|--|---------|
| Model SV-70 . . . . .                                  | \$99.00 |
| Model S-70 . . . . .                                   | 99.00   |
| Model S-70-A (Without Control Box) . . . . .           | 93.00   |
| Model S-70-C (Without Mileage & Control Box) . . . . . | 84.50   |

### REVOLUTIONS PER MINUTE

|                                       |         |
|---------------------------------------|---------|
| Model RV-30 (0 to 3000 RPM) . . . . . | \$93.00 |
| Model RV-30 (0 to 4500 RPM) . . . . . | 99.00   |
| Model R-30 (0 to 3000 RPM) . . . . .  | 93.00   |
| Model R-30 (0 to 4500 RPM) . . . . .  | 98.00   |

Light systems in above Recorders are furnished for 12 volts, unless 6 volts are specified.

The prices shown are for a 24-hour Servis Speed Recorder. If a 3-day Recorder is wanted, add \$4.30 to above prices. The prices shown for Speed Recorders include Federal Excise Tax.

### 50 Charts Included With All Models of Servis Recorders

### CHART PRICES

(Available in Multiples of 250 only)

4-inch Charts For Model K . . . . . \$4.40 per box of 250 \$15.75 per M  
(Available in 8-12-24-72-hours per revolution)

6-inch Charts For All Other Models . . . . . \$6.65 per box of 250 24.00 per M  
(Available in 24 and 72-hours per revolution for Servis Speed Recorders)

(Available in 4-8-12-24-72-hours per revolution for Models TRT-DS-DSR and M)

Chart Totaler (For use with all charts) . . . . . \$3.50 ea.

Immediate delivery on all standard models. All prices subject to change without notice.

Terms: net 30 days, F. O. B. Shipping Point.

## THE SERVICE RECORDER COMPANY

1765 EAST 18TH STREET CLEVELAND, OHIO, 44114, U.S.A.

JUNE 22, 1965



# Polaroid

## film production boosted with 75 Servis Recorders

**Waltham, Mass. plant  
among top 10 in U.S.**

• The handsome new plant of the Polaroid Corporation in Waltham, Mass., where film for the famous Polaroid Land "picture-in-a-minute" process is produced, was selected as one of the country's ten most outstanding plants last year for its many unique and practical features. Although not stressed in these awards, the automatic film-roll-assembly machines which were designed and built by Polaroid engineers included a system of production control and records which could be duplicated, generally, for hundreds of other types of production machinery.

It was stated in one of the awards that while the winning firm's officials and builders have added greatly to the company's productive capacity and technological program, it is more important to the industrial community that these new facilities are models that others can follow.

Specifically chosen to provide production departments with information for computing job rates, and to get the payable downtime per shift, 75 Servis Recorder Model M, machine time recorders were installed. Polaroid spokesmen also state that recorder charts help machine design engineers in evaluating and improving machine design.

Polaroid engineers used both options by mounting some of the recorders at the machines, and in other cases, in panel groups at operators' tables. Electric connections between working components of the units provide a record of the work as it is being done by the machine and shows accurately and permanently every minute of busy

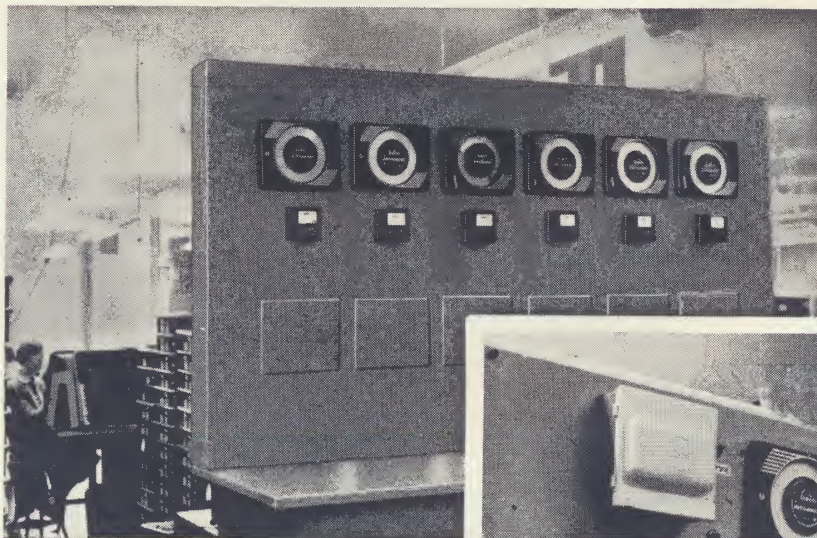
and downtime. The recorders can aid in setting rates, and eliminate human failures and inaccuracies in time studies, as well as, serving to back up foremen and good workmen by putting a flag on downtime and determining its cause. Expensive, avoidable, overtime is reduced.

This new plant is not Polaroid's first substantial use of recorders which are manufactured by the Service Recorder Company, Cleveland, Ohio. Polaroid officials state that other models of the recorders have been used over a long period of time to measure and pin-point working and idle time of company trucking operations. In addition to Recorders installed in the Company's complex automatic negative and positive film roll assembly machines, other Servis Recorder units are used on print coater machinery and on machines which make the film pod, the jellied reagent which develops the print inside the camera.

An official said that after many years of experience with earlier Servis Recorder equipment, various models of the recorders are used on virtually all machinery where production and time records are of value.

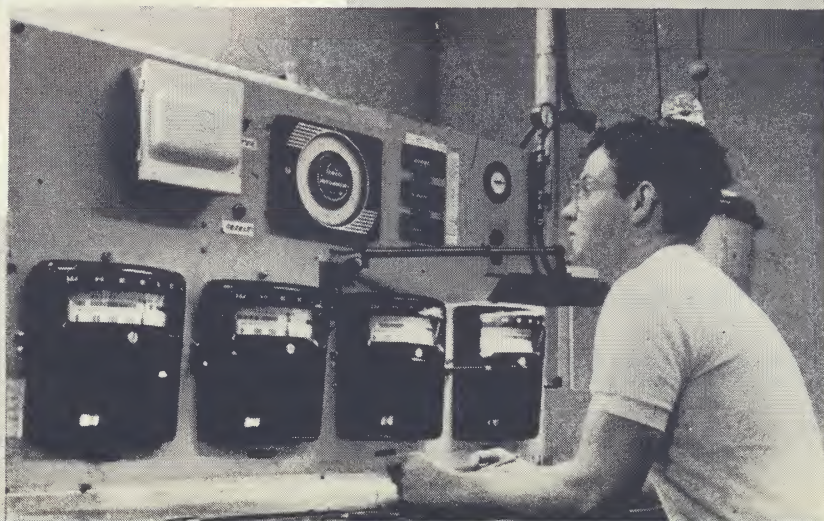
In the new Waltham plant inexpensive Service Recorder units play the role of record-keepers as a matter of course on machines which cost hundreds of thousands of dollars apiece.

The versatile machine time recorder is connected electrically to the motor of the equipment. It has a lucite lens on its face so the chart can be seen as the machine operates. Electric or mechanical chart drives are available in



*Two methods of installation of Servis machine time recorders are shown here. Left, the charting units are mounted in a panel grouping several yards away from the actual machines whose busy and idle time they record. Electrical connections run between the panel and the part of the recorders attached to the production machines in the background. These are Polaroid's automatic film-roll-making machines. Below, the Servis recorder is shown mounted (top-center) at a Pod Assembly machine with other*

*important production and quality control equipment in Polaroid's new Waltham, Mass., plant. In addition to busy and idle time recorded for use by payroll departments, the Servis recorders also help machine design engineers in evaluating and improving machine design, a Polaroid spokesman said. Polaroid also uses other models of Servis recorders on its company trucks.*



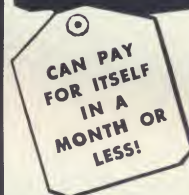


8, 12, or 24 hours per revolution. The 4-hour drive is electric only. The 72-hour drive is mechanical only. Each revolves the chart three times. An 8-hour chart drive, for example, would make a recording which varies with each of these differing chart drives. A sapphire stylus automatically marks the busy or idle line on the revolving chart. No pens or ink are required.

Servis Recorder units also are used for measuring process operations that require an exact length of time. Recorders have been used to give precise records of painting, baking, plating, and mixing cycles to prevent spoilage and waste.

For more information on recorders write to Service Recorder Co., 1013 Rockwell Ave., Cleveland 14, Ohio.

## "Foreman's Helper"



Servis Recorder Model M operates electrically, can be installed in foreman's office.

*Makes a Record of*  
**PRODUCTION TIME  
& DOWN TIME**  
*of any machine*

This device is called the **SERVIS RECORDER**. It gives you a precise work record of any machine. If a machine is idle the Servis Recorder reports exactly when and how long the delay lasted. Records are permanent, easy to read, easy to file. They enable you to improve scheduling, determine the cause of down time, and help you set rates.

Mechanical models which attach to machines, lift trucks or vehicles are also available.



Full information will be mailed to you at once.

**THE  
SERVICE  
RECORDER  
COMPANY**

**The Service Recorder Company**

**1765 E. 18th St.**

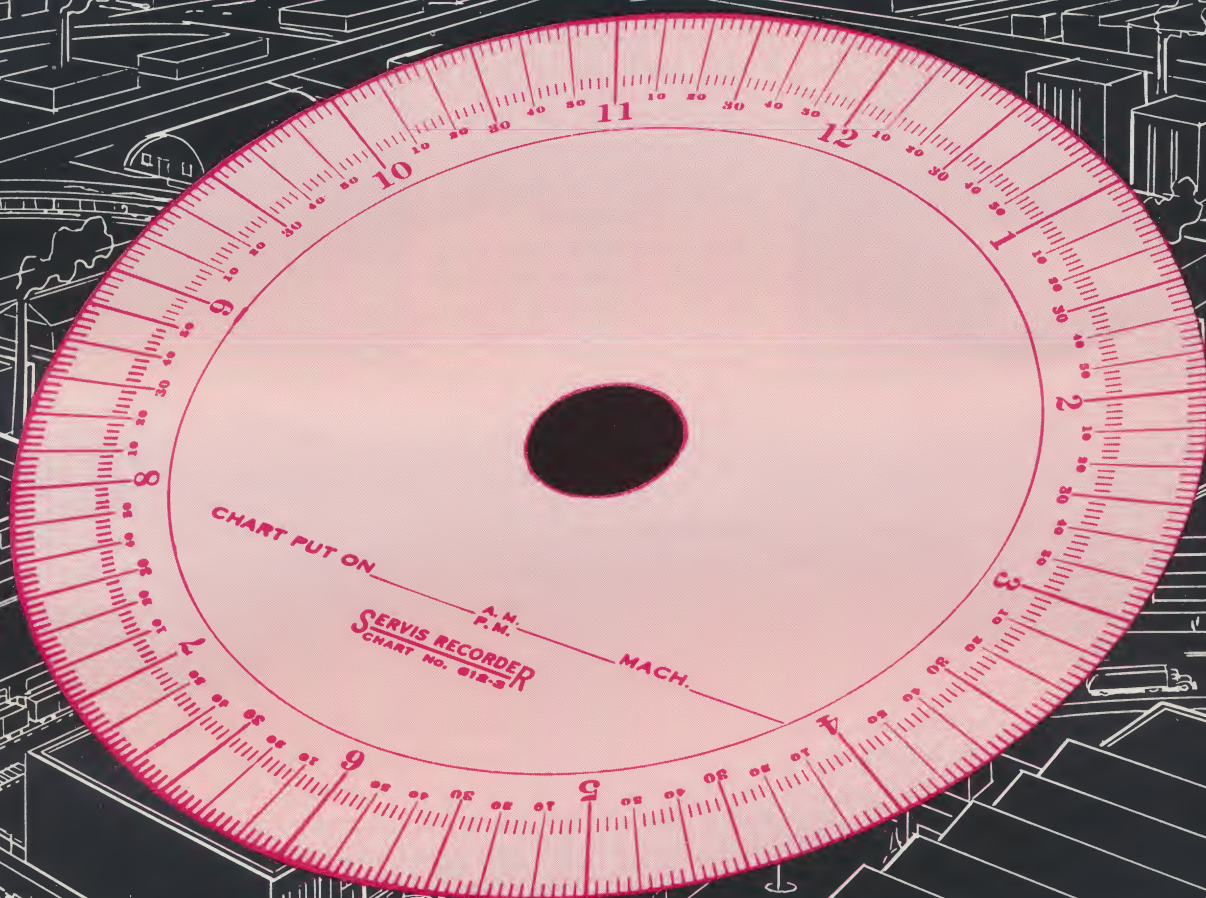
**Cleveland 14, Ohio**



# cost and quality control

with the

## Servis Recorder

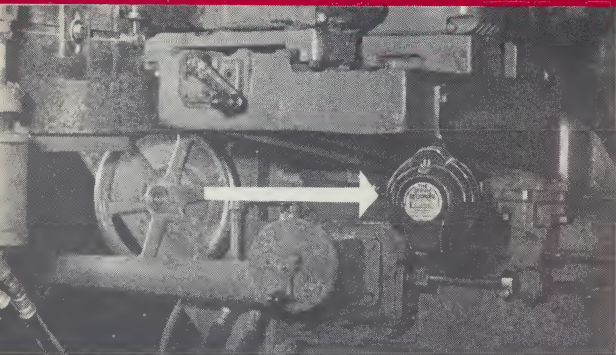


THE SERVICE RECORDER COMPANY

INDUSTRIAL CATALOG NO. 10A

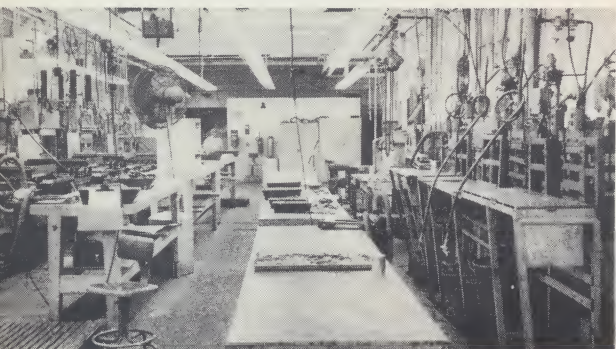
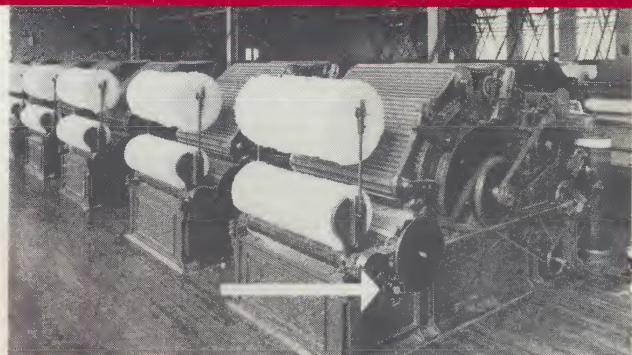


# How **SERVIS RECORDERS** Save Money... Improve Quality



◀ An automatic planer in a wood-working plant is costly. Knowing when and how long it is busy, or idle, is important to management.

Textile machinery must be operating as much as possible—Servis Recorder Charts tell management how efficiently it operates. ▶



◀ Rubber molding press production and down time are recorded permanently on easily-read, easily-filed charts. Recorders are located remotely...in a foreman's office.

Busy and idle time of straddle trucks is recorded for use by production, accounting, and maintenance departments. ▶



## SHOW WASTEFUL "DOWN TIME"

Idle time of machinery—avoidable or not—costs money! Servis Recorders give management an accurate, permanent record of busy and idle time of almost any type of equipment. They tell exactly when machines were busy—when idle—and how long. You can cut delays to the minimum... increase working time of expensive machinery... avoid new capital expenditures by getting more work out of your present equipment with Servis Recorders.

## ACCURATELY CONTROL QUALITY

Many plants have process operations requiring exact timing to insure perfect product quality. Paint baking, plating, mixing, and curing are but a few examples. Servis

Recorders will tell you exactly whether such processes are correctly timed. They help insure product quality of which you can be proud. Likewise, by preventing spoilage and waste in industrial processes, Servis Recorders repay their cost many times over.

## MECHANIZE TIME STUDIES

Facts about production revealed by Servis Recorders are unbeatable in setting rates—developing incentive plans—rearranging your working force—backing your foremen's claims, and many other problems relating to personnel. All these things are wrapped up in time—and Servis Recorders are "time-clocks" for machinery. They give you this valuable information at nominal cost—a small fraction of the savings that can be made with them.

## A FEW OF MANY SATISFIED USERS

**SERVIS  
RECORDERS  
IN  
Action**

Abbott Laboratories

Aluminum Co. of America

American Safety Razor Corp.

Anaconda Copper Mining Co.

Anheuser-Busch, Inc.

Armco Steel Corp.

Armour & Co.

Bigelow-Sanford Carpet Co., Inc.

Burlington Mills Corp.

Carter Carburetor Corp.

Chance Vought Aircraft, Div.

City of Boston

Container Corporation of America

E. I. duPont de Nemours Co.

General Electric Corp.

General Mills Inc.

General Motors Corp.

Glidden Co.

Goodyear Tire & Rubber Co.

Gulf Oil Corp.

H. J. Heinz Co.

Hughes Tool Co.

International Harvester Co.

Johns-Manville Corp.

Koppers Co. Inc.

P. Lorillard Co. Inc.

New York Central R.R. Co.

Ohio State University

Pittsburgh Plate Glass Co.

Procter & Gamble Mfg. Co.

Radio Corp. of America

St. Regis Paper Co.

State of California

Union Carbide & Carbon Corp.

U. S. Government

U. S. Steel Corp.

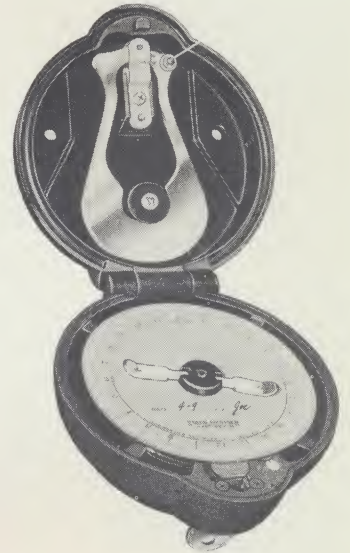
White Motor Co.



# 3 Mechanical Models to meet a wide variety of applications

## MODEL K

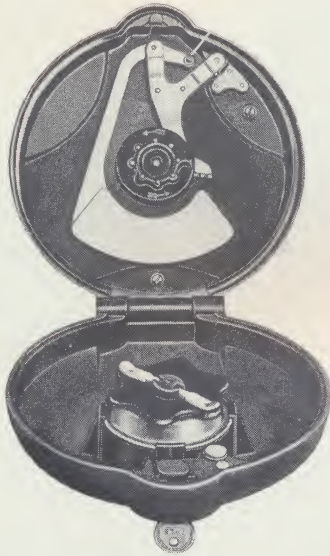
Makes its record in a single revolution on a 4" diameter chart. It bolts to a part of the machine that moves slowly only during productive work. Motion actuates the pendulum, so that its sapphire stylus simultaneously scratches the wax coating off the red paper chart, revealing the record. Drives are available to turn the chart in an 8, 12, or 24 hour period. Model K when closed and locked is entirely self-contained. It requires no gearing or complex attachment.  $4\frac{7}{8}$ " W x  $5\frac{1}{2}$ " H x  $2\frac{5}{8}$ " D.



MODEL K

## MODEL T-R-T

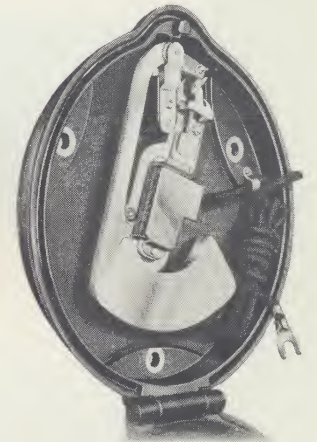
This model permits charts to revolve 3 times without running over its own record path. Charts are 6" in diameter for easier readability. Charts and clocks making revolutions in 4, 8, 12, 24 and 72 hours are available. A 3-day record, for example is made by a 24-hour clock and chart revolving 3 times, or a 7-day record is made by a 72-hour clock revolving 3 times (actually 9 days of record). Model T-R-T measures  $6\frac{3}{4}$ " W x  $7\frac{1}{2}$ " H x  $2\frac{3}{4}$ " D. Like Model K, it may be fastened to a part of the machine that moves slowly during production work.



MODEL T-R-T

## MODEL D-S

A double stylus unit with the same dimensions as Model T-R-T and using a 6" chart. It is primarily designed for industrial and over-the-road trucks. The chart on this model can be used for only one revolution. The first stylus produces the usual record showing traveling or standing time. Thus you know just how efficiently your trucks are being used. The second stylus shows when the truck was standing, but with the engine left idling. This information is valuable where fumes are a problem, and to overcome waste of gasoline. Maintenance schedules can be accurately set up on actual records of engine operation. A specially designed recorder with 6" diameter chart for lift trucks—Model DSR—is shown on the back cover.

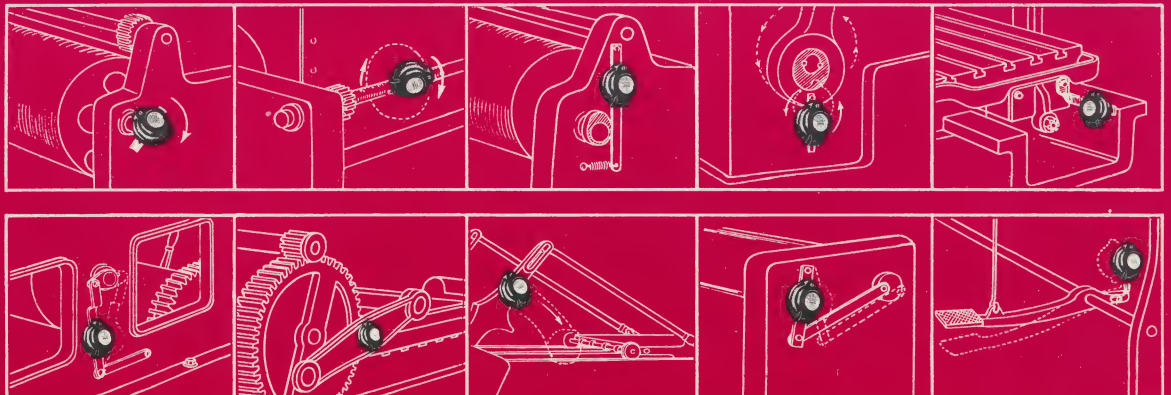


MODEL D-S

**IMMEDIATE DELIVERY ON STANDARD MODELS**

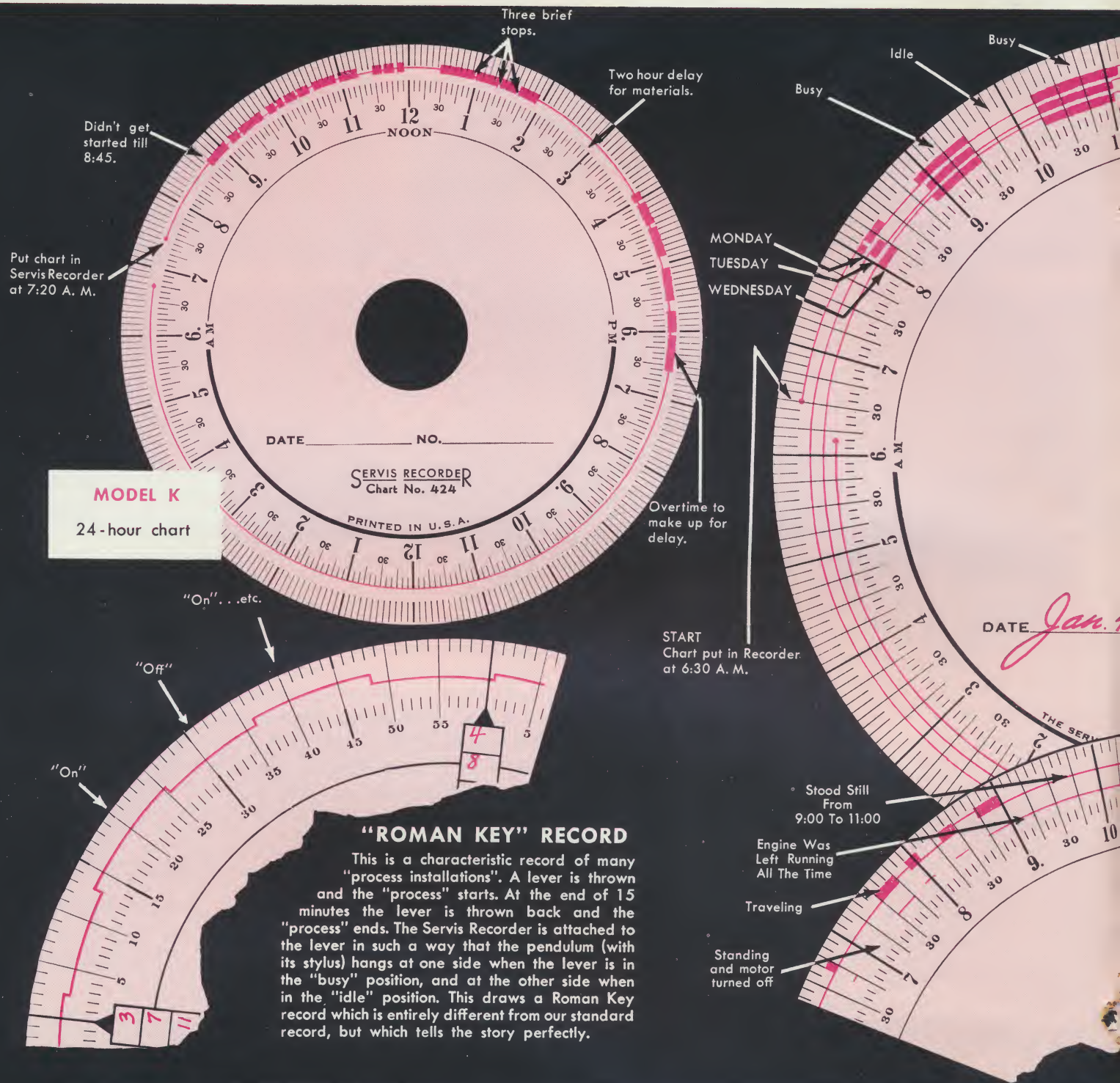
## USE SERVIS RECORDERS ON ANY BASIC MOTION

There are many different types of equipment to which a Servis Recorder can be attached, but basically there are only a few mechanical motions. Find a basic action of the machine, if possible slow and deliberate, and attach the Recorder to use it. Examples: rotary, eccentric, forward, backward, "straight" arm, or tilting motions.





# Put Your Finger On Time-V



## When Is Your Machinery Busy?

When is it idle? How long did it remain idle? How long was it actually in operation? How many times did it stop during each shift? What was the total "down time" of each machine? Bookkeepers can give you figures, but Servis Recorder charts show alert management exactly when and where

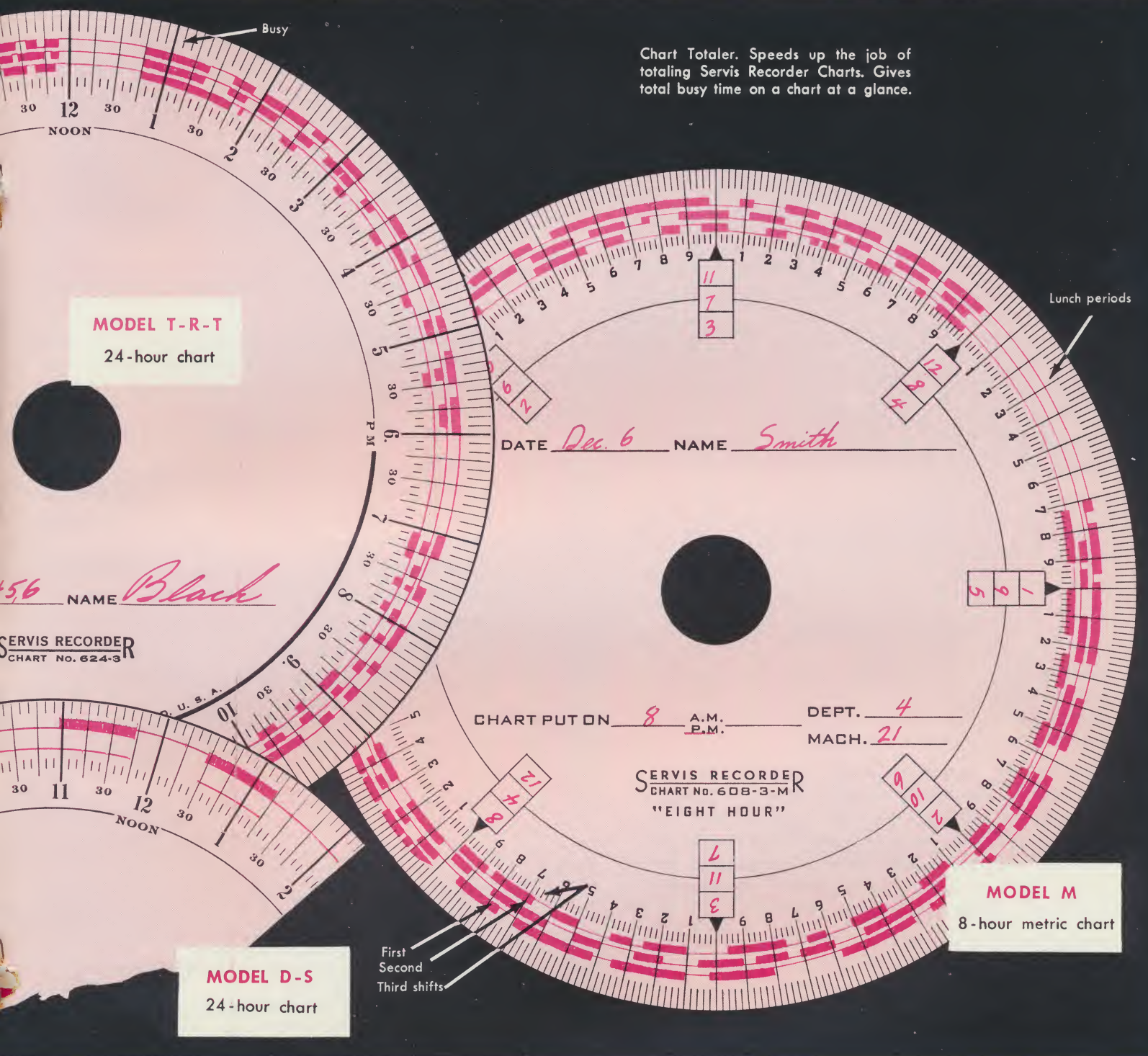
time is wasted so improvements can be made.

## "Down Time" Stares Out From These Charts

There is a chart for almost every need. Fast operations similar to those of punch presses are recorded best by a 4-hour chart and drive.



# Wasting With Exact Charts



Slower work—rubber molding presses as an example—is timed best on a 24-hour chart.

## Two Sizes of Charts

4" and 6" diameter. Model K Servis Recorders use 4" charts revolving once every 8, 12, 24 or 72 hours. Models M, T-R-T, D-S and DSR use 6"

charts. These make one revolution in 4, 8, 12, 24 or 72 hours. Metric charts showing hours and tenths of hours are also available.

Charts are easy to file for future reference. Each is a permanent record made by a sapphire stylus on durable, wax coated paper. No pen or ink necessary.



# Model M Electrical Models Fit Newest



These Model M Servis Recorders located in a foreman's office show what 21 different machines are doing all the time. There is a permanent record for each shift of each machine. Here is scientific accuracy justly recorded by good workers and by the ones who send your unseen costs soaring. With these charts you can act.

## HOW IT WORKS

Install Model M either at your machines or in remote locations such as a foreman's or superintendent's office and permanent charts show you every minute of busy and down time for your machines on every shift.

These versatile, accurate instruments record the productive and non-productive time of almost any type of equipment. A simple connection may be made between the switch controlling the equipment and the motor which operates it, or a switch may be installed to actuate the Model M. The switch may be actuated mechanically, or by pressure, temperature, speed, weight, light or vacuum.

A stylus, driven by a small synchronous motor, makes short, vertical strokes on the chart (40 times per minute). A wide line is then developed on the chart as it is being revolved constantly at clock speed. During idle periods, the stylus is stationary and a fine line is drawn on the chart.

## CHART DRIVES

Electric or mechanical chart drives are available in 8, 12 or 24 hours per revolution. The 4-hour drive is electric only. The 72-hour drive is mechanical only. Each revolves the chart three times. An 8-hour chart drive, for example, would make a 24-hour record, and a 24-hour chart drive would provide three days of records. The scale of recording varies with each of these differing chart drives.

## HOW TO USE FOR QUALITY CONTROL, COST ACCOUNTING PRODUCTION CONTROL

- Set rates with Model M Servis Recorder.
- Eliminate human failures and inaccuracies in time studies.
- Make productivity checks with one Servis Recorder Chart per machine.
- Back up good workmen, put a flag on down time and thus locate its cause.
- Double-check cycle times when exact length of a process affects quality.

## FEATURES

**Remote Location:** You can put a Model M right at a machine and thus make operators aware of your interest in continuous production, or you can install in an office away from machines.

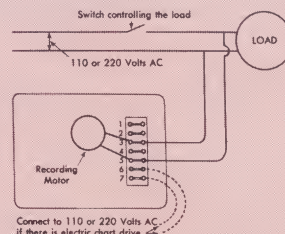
**Simple Design and Rugged Construction:** Built to provide years of reliable service free of maintenance.

**Visible Recording:** A transparent lucite lens lets you see the record of work as it is being made by the machine.

**Low Cost:** Servis Recorders soon pay for themselves with dividends through savings.

## The Model M Is Connected Easily

Plant electricians can easily and quickly install the Model M. As a rule of thumb, the simplest electrical connections are generally the best. In most cases, no series relays are required. Recording motor, elapsed timer and counters are designed for 110 volts, AC, 60-cycle operation only. However, if recorder is to be used on 220-volt, AC, proper resistors are installed at no additional charge. For voltages greater than 220, small, low wattage transformers are necessary.

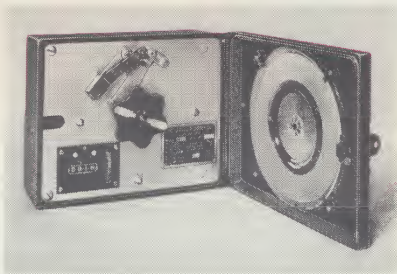
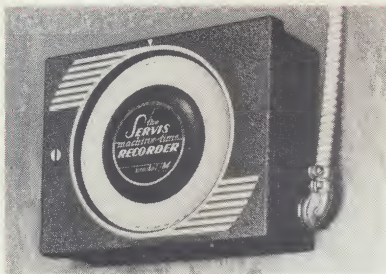


*Between the Switch and the Load.* Simplest of all installations. Here you do not need our series relay or any extra switch. You merely connect the recording motor across the line and it will run and record

only when the load switch has closed the circuit. For 3-phase, connect across any 2 of the wires. Note the dotted lines showing how to connect if the Recorder has electric chart drive.



# Industrial Needs



The Model M shown closed and open for chart changing.

## ACCESSORIES

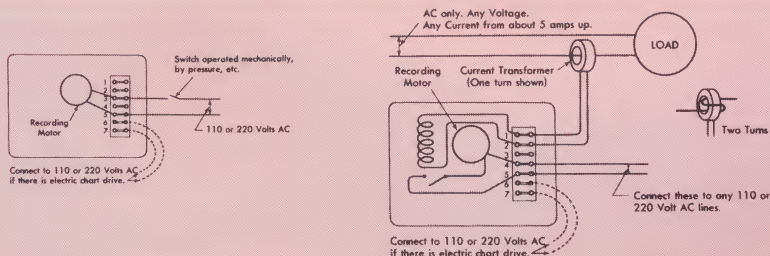
**Elapsed Timer**—To simplify and speed up "busy time" tabulating. This device is run by a motor synchronized with the recording motor of the Model M, and it totals running time of the machine. Registers in hours and tenths to 9999.9 and repeats.

**Reset Counter**—Counts up to 9999 . . . but can be easily reset at any time. Connected to the recording motor circuit and counts number of pieces or cycles.

**Non-Reset Counter**—Same as the Reset Counter, but cannot be reset to zero, and counts to a total of 99,999.

**Series Relay**—This is sometimes needed to simplify a difficult electrical connection. The relay is also necessary when operating the Recorder with induced current from a current transformer, or when selective recording is desired. (See section on Selective Recording).

**Current Transformer**—Not a part of the Recorder but needed when induced current is used to operate the series relay which controls the Recorder.



Any External Switch actuated mechanically, or by pressure, temperature, speed, weight, light, vacuum, etc., can be used to close the recording motor circuit. When an operation is such that two or more events must occur simultaneously for productive work to be done, use two or more switches in series. Then all must be closed to operate the recording motor.

**Connections for Series Relay.** A relay does the same job as an external switch described in diagram 2, but it is electrically operated, and can be installed right in the Recorder. The series relay coil is connected in series with the load current which must be in the range of 1½ to 10 amperes, either AC or DC.

**Using Current Transformer to operate the Series Relay.** This method is often desirable when current is over 10 amperes, or when voltage is greater than 220, or where it is not convenient to break into the load line. A current transformer works very much like a "tong-tester". A single AC load wire (primary circuit) passing through it induces a small current of very low voltage in the transformer, or secondary circuit. If the primary amperage is small, use more turns around the transformer until you induce enough current to operate the relay.

**Selective Recording.** When a machine under load uses considerably more current than when idling, the load time can be distinguished and recorded. We refer to this practice as selective recording, and feel that one of our representatives should work with you on the details of the application. Please consult us.

## Servis Recorders on Lift Trucks help control:

- Materials Handling Costs
- Maintenance Schedules
- Scheduling deliveries of materials
- Assignment of equipment
- Fumes and Fuel Waste



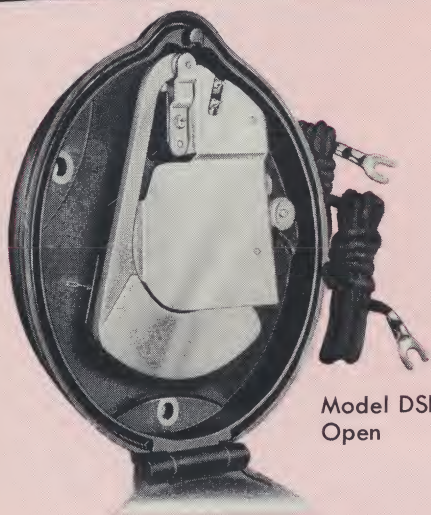
Materials handling adds to the price of a product without adding value. Servis Recorders help you squeeze out the waste in materials handling. One of the most widely used models, is the Model DS. It has a double stylus. One stylus shows traveling or standing time to tell you how efficiently trucks are used. The second stylus records engine idling to give maintenance department an accurate count of engine running hours.

For Chart Data see pages 4 and 5.

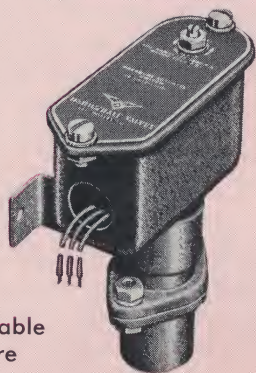
For Details on Lift Recorder see next page.



# LIFT RECORDS PLUS

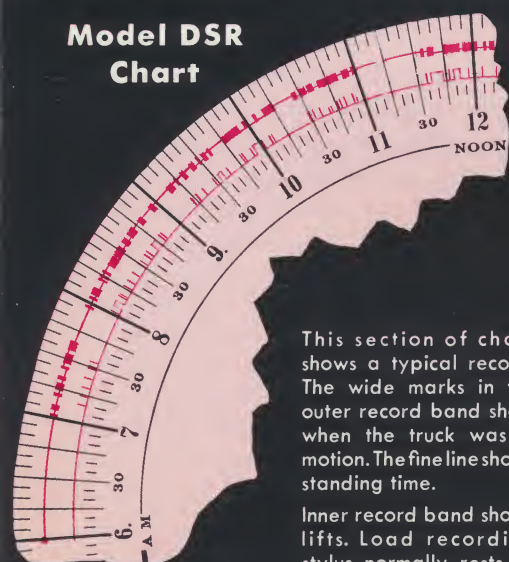


Model DSR  
Open



Adjustable  
Pressure  
Switch

Model DSR  
Chart



This section of chart shows a typical record. The wide marks in the outer record band show when the truck was in motion. The fine lines show standing time.

Inner record band shows lifts. Load recording stylus normally rests at lower or inner position. When activated by pressure switch, it is moved outward to record each lift.

To offer maximum control of operating efficiency for your lift trucks, the Model DSR records number of productive lifts in addition to busy and idle time of each truck. The records are made on a 6 inch diameter chart, revolving once.

This model records the raising or lowering of a predetermined load. The limits generally are between 5% of the truck's capacity and a full load. Minimums may be established, and the chart will show only those lifts of the minimum weight or greater. Section of chart below, slightly reduced, shows a typical record.

Selective load records are made by using an adjustable pressure switch furnished with each Model DSR Servis Recorder, but priced separately. This switch fits into the hydraulic system between the lift control and the cylinder. It is sensitive to system pressure changes but insensitive to surges or vibration. Switch setting can be adjusted externally and then sealed. The load recording stylus is always in contact with the chart. When the predetermined load or more is lifted, an electrical circuit is closed and this stylus is lifted up, making a record.

Complete installation instructions are supplied with every unit.

## HOW SERVIS RECORDERS HAVE HELPED

"We have boosted utilization of our five trucks an average of 12% with your recorders" . . . steel warehouse.

"Your ordinary recorders are fine to tell us whether trucks are busy, but the DSR tells us how efficient their 'busyness' is" . . . aluminum producer.

"Now we know that we have the right capacity truck on our jobs" . . . manufacturer.

"We have found that two of every five of our trucks can be diverted to other uses" . . . leading electrical manufacturer.

To stretch your budget and to increase efficiency of handling, you won't find a better helper anywhere—for so little—as in Servis Recorders. Call your Servis Recorder Specialist or write us today.

## THE SERVICE RECORDER COMPANY

CLEVELAND, OHIO





## THE SERVICE RECORDER COMPANY

PRODUCTION AND TRAVEL TIME RECORDERS

1765 EAST 18TH STREET  
CLEVELAND, OHIO 44114  
PHONE: 241-5032  
AREA CODE: 216

January 13, 1966

Mr. T. Nelson  
Box 1546  
Poughkeepsie, N.Y. 12603

Attention:

Dear Sir:

Here are facts you requested about Servis Recorder savings in industry. This material gives you both the technical and practical information about Servis Recorders.

These compact, easily installed electrical and mechanical recorders pay for themselves in a matter of weeks. Used in plants like your own for setting rates, checking busy and down time of machines, and maintaining quality control, Servis Recorders have proved their worth since 1911.

Your Servis Recorder specialist can offer additional suggestions to help you solve your specific problems.

Thank you for your interest.

Very truly yours,

THE SERVICE RECORDER COMPANY

*R. A. Bixby*  
R. A. Bixby  
Sales Manager

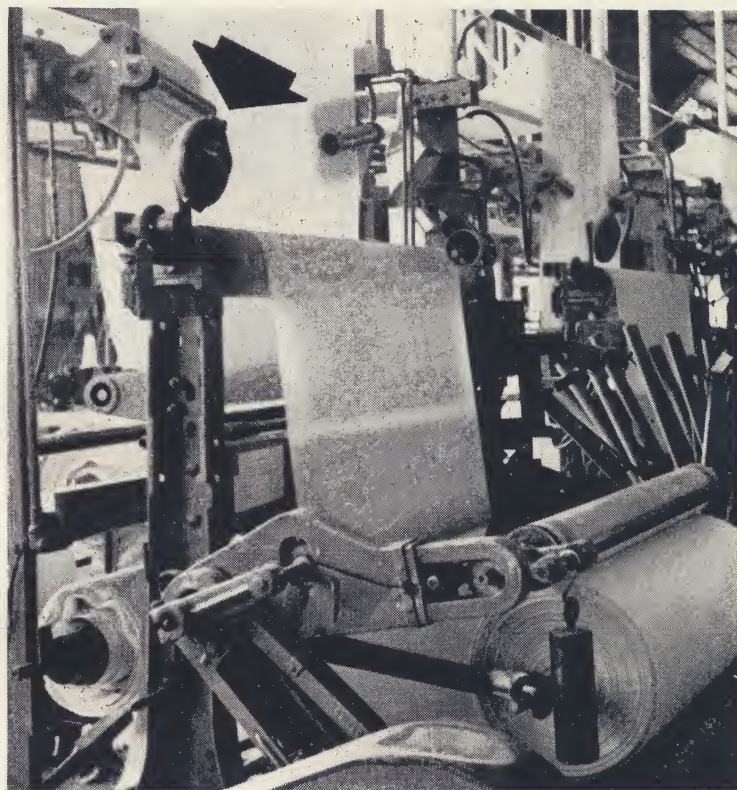
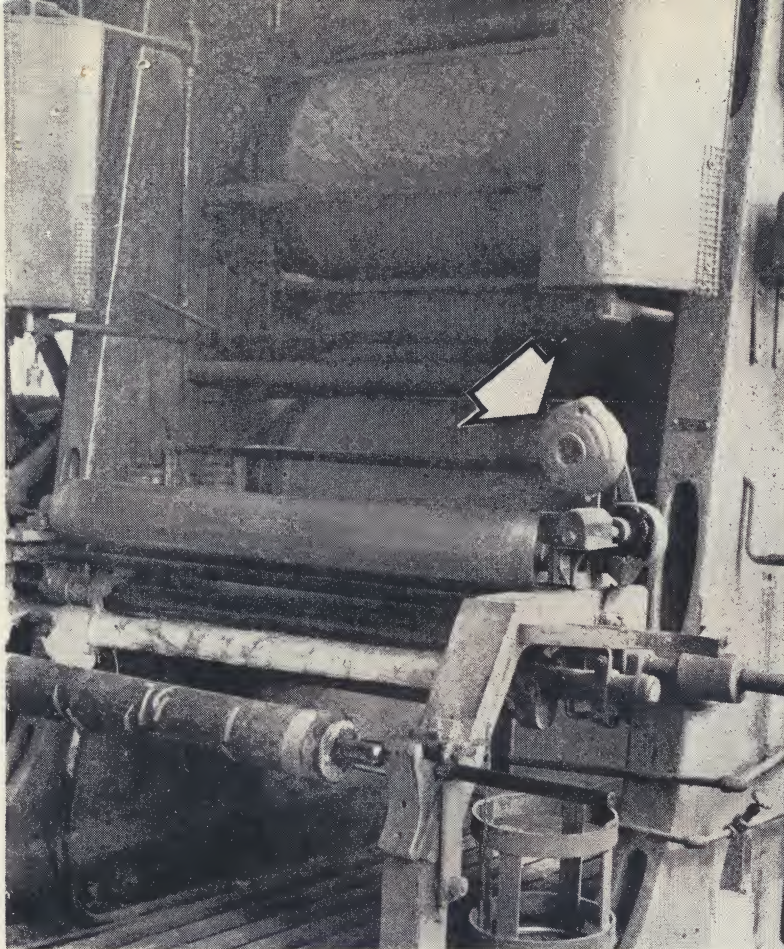
RAB:hg  
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P. S. Order from our Distributor:

N. E. Weiner  
1776 Broadway (Rm. 1702)  
New York, N.Y. 10019  
AC212:247-6381



LEFT: One of the recorders mounted on a batcher.  
 BELOW: Counter and recorder attached to inspection equipment.



# Finisher's silent watchmen

*How management profits from data provided by machine operations recorders*

## Staff prepared

### Exclusive

ONE LARGE cloth finishing plant in the South uses about 100 clock-wound production recorders\* to make a printed around-the-clock record of production on the various machines. The record shows time, machine, speed, and stoppage (when and for how long).

Yardage counters are used in conjunction with the recorders. The production is about two million yards per week, and the information from the recorders is used primarily in figuring production incentive bonuses. It has

\*Made by The Service Recorder Co.

proved effective and relatively foolproof.

After the recorder is unlocked, the 6" chart inserted, and the clock wound, a sapphire stylus on a pendulum marks a broad line as the machine runs, and a steady, narrow line during idle periods. No pens nor ink are required. The stylus scratches the chart surface, exposing the underlying backing in a clear mark.

An industrial engineer (only he has access to the clocks) collects the printed charts once every 24 hours and gives them to the time keeper who correlates them with information lifted from the production counters and/or yardage clocks.

The charts cost less than 2½ cents each and provide accurate and permanent reports. Also, the

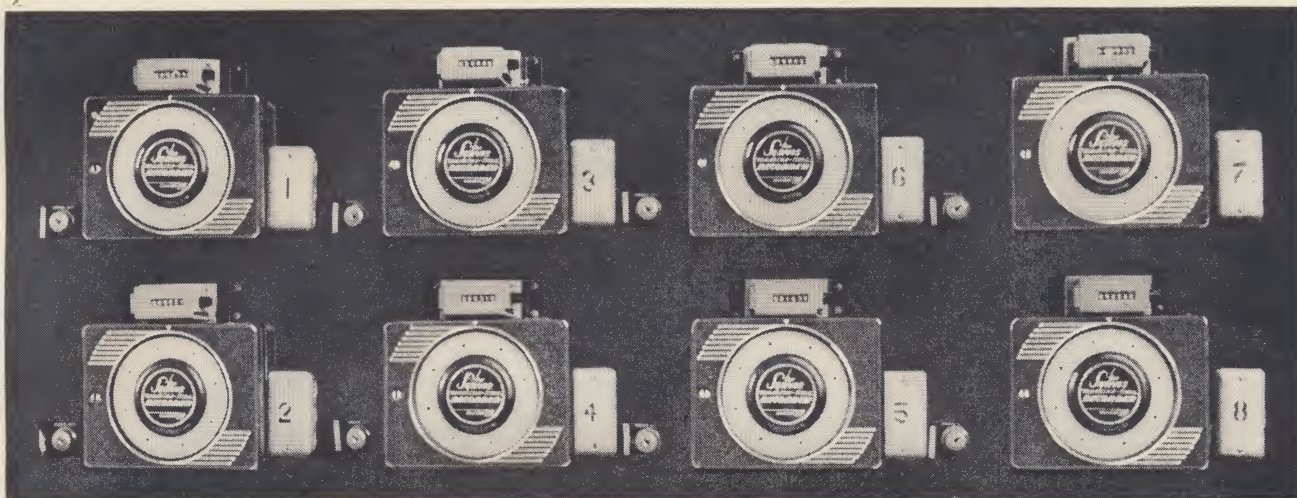
charts are used by mill personnel to determine efficiencies of machines and operators and to pinpoint maintenance, engineering, and quality control problems.

A base rate is established for each machine for an eight-hour period (based on experience); and if the operator exceeds this figure, he is paid a bonus rate on excess over the base.

No maintenance problems have been evident. The recorders have been in use for about 30 years, but in this instance an old model serves quite well.

An eccentric drive from gears driven from the cloth roll actuates the clock pen. The strand of goods moves the cloth roll which actuates the gears to the recorder and yardage counter, and the clock drives the chart.





*A panel installation of Model M Servis Recorders, as used by Universal Wire Spring Co. in its brake press department, recording actual work time of each piece, as well as the idle time of this equipment.*

# More Production Less Down Time

## with Servis Recorders in this plant

• The Universal Wire Spring Company of Bedford, Ohio, has increased production and cut the down time in two departments of its plant as a result of using Model M Servis Recorders.

A major supplier of frames and springs used in automobile seats by leading automotive manufacturers, the spring company has the problem of making every productive minute count heavily. Determining the cost of down time or interrupted production has been a problem for a number of years. Various other methods were tried and found lacking to get an accurate picture of nonproductive time on automatic welders and on the huge 350-ton brake presses in another department. Model M Servis Recorders were studied and found to be an ideal answer for the automatic welding machines, with some additional equipment (as described below) needed to fit them into the accurate checking of brake presses.

The Model M Servis Recorders are tied in to accurately

chart the actual welding operation which is of very short duration. As soon as the operation is over, the recorder shows it—this produces a saw-tooth design on the wax coated permanent-type Servis Recorder chart.

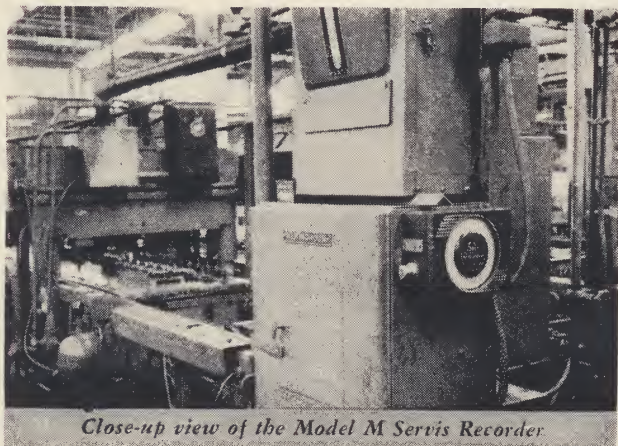
Any delays are also shown on the chart by means of a thin, steady line. Management uses this chart as a tool to determine the cause of delays, machine failure, lack of material, and then labels it either authorized or unauthorized down time. The welders are used in the manufacture of frames for auto seats.

Coinciding with this check on productivity, The Universal Wire Spring Company has an incentive pay program. Charts for each welding machine are used by the payroll department to check the accuracy of the employee's time card.

In the press department where parts are made for auto seat frames, electric counters are attached to the Model M's as is a switch, the three of which are tied into the electrical circuit which activates the work producing operation on the press. Three important facts are obtained here and show on the Servis Recorder chart for each piece. Actual pieces produced are counted, down time and productive time is recorded, and the amount of maintenance time is also determined.

The charts in this department again are used as a basis for checking the accuracy of the operators' time cards. The Universal Wire Spring Company has found very definite values from this system. Although it is not possible to give an accurate count of improvement in productivity per machine per shift, management estimates an overall increase of from five to seven per cent in productive time. The installation actually paid for itself within a short time.

Additional information on recorders may be obtained by writing The Service Recorder Co., 1013 Rockwell Avenue, Cleveland 14, Ohio.



*Close-up view of the Model M Servis Recorder*